REMARKS

The Examiner is thanked for the careful examination of the application. However, in view of the following remarks, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections.

Art Rejections:

Claims 1-3 and 6-10 have been rejected under 35 USC 103(a) as being unpatentable over Aruga (USP 6,027,618) in view of Miller (USP 5,417,5370. The Examiner admits that Aruga does not teach more than one outward or return carry line. For this deficiency, the examiner relies on Miller, alleging that Miller teaches a vacuum apparatus for transferring substrates, and that Miller discloses a plurality of carry lines 36 for moving substrates about the chambers. The Examiner concludes that it would have been obvious to provide the system of Aruga with multiple conveying paths as taught by Miller in order to maximize the output of the process facility. As recognized by the Examiner, Aruga teaches a *single* track extending through a plurality of process chambers 2.

However, Miller operates quite differently than either the present invention or Aruga. Specifically, Miller discloses a linear array of transport modules 12. See Figure 1 and column 3, line 64. The transport modules merely contain tracks 36, transporters 26, docking ports 34, and staging areas. No vacuum processing occurs in the transport modules 12. The vacuum processing occurs in the process modules 40, 44, and 46 (col. 4, line 16 and lines 63 – 67). Transfer robots 14 transfer the wafers between the transport modules 12 and the process modules 40, 44, 46. Col. 4, lines 61 – 63. Furthermore, the process modules 40, 44, 46 of Miller are not "longitudinally provided", they are instead arranged in clusters.

In contrast to the prior art, claims 1 – 3 and 6 – 10 each define a combination that includes a plurality of longitudinally provided process chambers having first *and* second return carry lines, wherein each of the carry lines has a different path and *each* of the carry lines passes *through* the plurality of vacuum processing chambers.

As set forth in paragraph 102 of the publication (US 2002-0080291) of the present application, by the adoption of the return carry line as a path that is different than the outward carry line, processing can be performed on the substrate irrespective of whether the processing is the same or different on the return carry line, and the number of processing steps can be increased. In addition, *and because the return carry line thereof is divided into two branches*, processing can be performed when the substrates 9 are passed through the two return carry lines 95L, 95R and returned, and productivity can be significantly increased. However, the present invention is not limited to the disclosed preferred embodiments.

Neither Aruga nor Miller, teaches longitudinally provided process chambers having first *and* second return carry lines, wherein each of the carry lines has a different path, and *each* of the carry lines passes *through* the plurality of vacuum processing chambers.

Accordingly, claims 1 – 3 and 6 – 10 are patentable over the combination of Aruga and Miller.

Claims 11-15 have been rejected under 35 USC 103(a) as being unpatentable over Takahashi (USP 4,643,629) in view of Miller. The Examiner admits that Takahashi does not teach a system having a branch line with a plurality of outward or return carry lines. For this deficiency, the examiner relies on Miller, alleging that

Miller discloses a plurality of carry lines 36 for moving substrates about the chambers.

However, claims 11 - 15 define two return carry lines wherein each of the carry lines has a different path and each of the return carry lines passes through a plurality of the vacuum processing chambers. Since neither Takahashi nor Miller, teaches longitudinally provided process chambers having first *and* second return carry lines, wherein each of the carry lines has a different path, and *each* of the carry lines passes *through* the plurality of vacuum processing chambers. Accordingly, claims 11 – 15 are patentable over Takahashi and Miller. See the comments above concerning claims 1 – 3 and 6 – 10.

Claims 4 and 5 have been rejected under 35 USC 103(a) as being unpatentable over Aruga in view of Miller. However, claims 4 and 5 depend from claim 1, and are thus patentable over the cited art at least for the reasons set forth above.

Accordingly, all of the claims are patentable over the applied prior art.

In the event that there are any questions concerning this response, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

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